

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference PD030134 | FOR FURTHER ACTION | | See Form PCT/IPEA/416 |
| International application No. PCT/EP2004/053447 | International filing date (day/month/year) 14.12.2004 | Priority date (day/month/year) 18.12.2003 | |
| International Patent Classification (IPC) or national classification and IPC H03M7/24, H03M7/50, G09G3/28 | | | |
| Applicant THOMSON LICENSING SA et al | | | |

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| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> <i>sent to the applicant and to the International Bureau</i> a total of 1 sheets, as follows:</p> <ul style="list-style-type: none"> <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input checked="" type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. <p>b. <input type="checkbox"/> <i>(sent to the International Bureau only)</i> a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> | |
| <p>4. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Box No. I Basis of the opinion <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application | |

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| Date of submission of the demand 17.10.2005 | Date of completion of this report 06.12.2005 |
| Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 | Authorized Officer Winkler, G Telephone No. +49 89 2399-8184 |



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/053447

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
 - international search (under Rules 12.3 and 23.1(b))
 - publication of the international application (under Rule 12.4)
 - international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

Description, Pages

1-7 as originally filed

Claims, Numbers

1-3 filed with the demand

Drawings, Sheets

1/1 as originally filed

a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. The amendments have resulted in the cancellation of:

- the description, pages
- the claims, Nos.
- the drawings, sheets/figs
- the sequence listing (*specify*):
- any table(s) related to sequence listing (*specify*):

4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages
- the claims, Nos. 1-2
- the drawings, sheets/figs
- the sequence listing (*specify*):
- any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/053447

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|------|--------|-----|
| Novelty (N) | Yes: | Claims | 2,3 |
| | No: | Claims | 1 |
| Inventive step (IS) | Yes: | Claims | 3 |
| | No: | Claims | 2 |
| Industrial applicability (IA) | Yes: | Claims | 1-3 |
| | No: | Claims | |

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document:

D1: US 5 819 017 A

- 1 The amendments filed with the demand introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT. The amendments concerned are the modification of the phrase "with the value of said N bits word" into "as the value of said N bits word increases" in claims 1 and 2.

The modified phrase implicitly defines that the size of the mantissa is monotone increasing as the value the N-bits word increases. However, no basis can be found in the application as filed (cf e.g. page 4, lines 12 and 13) for this amendment.

Thus, these amendments are contrary to Article 34(2)(b) PCT.

Hence, for the reasoned statement with regard to novelty, inventive step or industrial applicability the claims filed with the demand are examined without taking the above identified amendments into consideration.

- 2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

The document D1 discloses (the references in parentheses applying to this document) a method for transcoding a N bits word into a M bits word, whereby N is larger than M (cf column 12, lines 21 - 22 and table 3). D1 discloses further that the N bits word is broken down into an exponent part having a variable number of A bits and a mantissa part having a variable number of B bits. D1 discloses further that the exponent part and the mantissa having a size which varies according to the value of the N bits word, whereby the size of the mantissa increases with the value of the N bits word. D1 discloses further that least significant bits of the mantissa part are removed, thus that $A+B=M$ (cf table 3).

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/EP2004/053447

Thus, D1 discloses all the features of claim 1.

3 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 2 does not involve an inventive step in the sense of Article 33(3) PCT, for the following reasons:

Claim 2 specifies apparatus features corresponding to the method steps of claim 1. Since, D1 discloses the method steps of claim 1 (cf point 2 above) and a person skilled in the art would implement the method steps of D1 without exercise of inventive skill in hardware or software, the person skilled in the art would arrive at the subject-matter of claim 2.

4 The combination of the features of dependent claim 3 is neither known from, nor rendered obvious by, the available prior art, for the following reason:

A person skilled in the art would not apply a lossy compression algorithm known from one technical field to another technical field, since he knows that every lossy compression algorithm is specially adapted to the data which are processed in order not to cause noticeable distortions. Thus, a person skilled in the art working in the field of plasma displays would not consider D1, which is concerned with storing 3D-depth information, when processing data delivered from a degamma function.

21.10.2005

CLAIMS

(87)

1. Method for transcoding a N bits word into a M bits word, N > M, characterized in that it comprises the following steps :

5 - breaking down the N bits word into an exponent part and a mantissa part having each a size which varies according to the value of said N bits word, the size of the mantissa part increasing as the value of said N bits word increases, and

10 - encoding the exponent part of the N bits word into a variable number of bits A and removing, if need be, least significant bits of the mantissa part in order to obtain a mantissa with a variable number of bits B, with A+B=M.

2. Device for transcoding a N bits word into a M bits word, N > M, characterized it comprises

15 - means for breaking down the N bits word into an exponent part and a mantissa part having each a size which varies according to the value of said N bits word, the size of the mantissa part increasing as the value of said N bits word increases, and

20 - means for encoding the exponent part of the N bits word into a variable number of bits A and removing, if need be, least significant bits of the mantissa part in order to obtain a mantissa with a variable number of bits B, with A+B=M.

25 3. Plasma display panel comprising :

- a degamma means (80) for applying a degamma function to video input data (Y[9:0]) and delivering N bits data;

- a transcoding device (90) for transcoding said N bits data into M bits data, and

30 - a mapping memory (100) for remapping M bits data, with N>M, characterized in that said transcoding device (90) is a transcoding device according to claim 2.